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EXAMINER

CROUCH, J.

ART UNIT	PAPER NUMBER
1819	222

12/15/96

DATE MAILED:

NOTICE OF ALLOWABILITY

PART I

- ☒ This communication is responsive to Amendment filed 9/17/96.
- ☐ All the claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice Of Allowance And Issue Fee Due or other appropriate communication will be sent in due course.
- ☒ The allowed claims are 82, 83, 97-118, 123, 125, 126, 128 and 129 renumbered as 1-29.
- ☐ The drawings filed on _____ are acceptable.
- ☐ Acknowledgment is made of the claim for priority under 35 U.S.C. 119. The certified copy has [] been received. [] not been received. [] been filed in parent application Serial No. _____, filed on _____.
- ☒ Note the attached Examiner's Amendment.
- ☒ Note the attached Examiner Interview Summary Record, PTOL-413. (2)
- ☒ Note the attached Examiner's Statement of Reasons for Allowance.
- ☐ Note the attached NOTICE OF REFERENCES CITED, PTO-892.
- ☐ Note the attached INFORMATION DISCLOSURE CITATION, PTO-1449.

PART II

A SHORTENED STATUTORY PERIOD FOR RESPONSE to comply with the requirements noted below is set to EXPIRE THREE MONTHS FROM THE "DATE MAILED" indicated on this form. Failure to timely comply will result in the ABANDONMENT of this application. Extensions of time may be obtained under the provisions of 37 CFR 1.136(a).

- ☐ Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL APPLICATION, PTO-152, which discloses that the oath or declaration is deficient. A SUBSTITUTE OATH OR DECLARATION IS REQUIRED.
- ☒ APPLICANT MUST MAKE THE DRAWING CHANGES INDICATED BELOW IN THE MANNER SET FORTH ON THE REVERSE SIDE OF THIS PAPER.
 - ☒ Drawing informalities are indicated on the NOTICE RE PATENT DRAWINGS, PTO-948, attached hereto or to Paper No. 10. CORRECTION IS REQUIRED.
 - ☐ The proposed drawing correction filed on _____ has been approved by the examiner. CORRECTION IS REQUIRED.
 - ☐ Approved drawing corrections are described by the examiner in the attached EXAMINER'S AMENDMENT. CORRECTION IS REQUIRED.
 - ☒ Formal drawings are now REQUIRED.

Any response to this letter should include in the upper right hand corner, the following information from the NOTICE OF ALLOWANCE AND ISSUE FEE DUE: ISSUE BATCH NUMBER, DATE OF THE NOTICE OF ALLOWANCE, AND SERIAL NUMBER.

Attachments:

- ☒ Examiner's Amendment
- ☒ Examiner Interview Summary Record, PTOL-413 (2)
- ☐ Reasons for Allowance
- ☐ Notice of References Cited, PTO-892
- ☐ Information Disclosure Citation, PTO-1449
- ☐ Notice of Informal Application, PTO-152
- ☐ Notice re Patent Drawings, PTO-948
- ☐ Listing of Bonded Draftsmen
- ☐ Other

An examiner's amendment to the record appears below. Should the changes and/or additions be unacceptable to applicant, an amendment may be filed as provided by 37 CFR 1.312. To ensure consideration of such an amendment, it MUST be submitted no later than the payment of the issue fee. Authorization for this examiner's amendment was given in a telephone interview with Mr. Joe Liebescheutz on October 25, 1996.

1. Please re-write the following claims:

¹
~~123~~. A method of producing a transgenic bovine, the method comprising:

obtaining an ovum from bovine ovaries;

maturing the ovum *in vitro*;

fertilizing the mature ovum *in vitro* to form a zygote;

introducing a transgene into the zygote *in vitro*;

maturing the zygote to a preimplantation stage embryo *in vitro*; and

transplanting the embryo into a recipient female bovine, wherein the female bovine

gestates the embryo to produce a transgenic bovine.

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~~129~~. The method of claim ~~123~~¹, further comprising mating said transgenic bovine to produce a transgenic bovine progeny.

¹ ⁶
~~125~~. The method of claim ~~123~~ or ~~129~~, wherein the transgene comprises, in operable association:

a mammary gland specific promoter;

a mammary gland specific enhancer;

a DNA sequence encoding a signal sequence functional in bovine mammary secretory cells; and

a DNA sequence encoding a polypeptide of interest;

D3 wherein the transgenic bovine or a female progeny of the transgenic bovine, expresses the transgene in the mammary secretory cells such that the polypeptide of interest is detectable in the milk of the transgenic bovine or female progeny of the transgenic bovine.

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128. A method of producing a transgenic bovine embryo, the method comprising:

obtaining an ovum from bovine ovaries;

D4 maturing the ovum *in vitro*;

fertilizing the mature ovum *in vitro* to form a zygote; and

introducing a transgene into the zygote, wherein the transgene integrates into the genome of the zygote to form the transgenic bovine embryo

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97. The method of claim 123, wherein a plurality of ova are obtained from bovine ovaries, matured and fertilized *in vitro* to form a plurality of zygotes, and wherein in said introducing step said zygotes are substantially synchronous.

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117. The method of claim 106, wherein the polypeptide is a wild-type polypeptide or an allelic variant thereof.

2. In claim 99, line 2, delete ":" after comprises.
3. In claims 107, 108 and 117, line 2 delete "recombinant".
4. Cancel claims 1-28, 41-53, 55-72, 74-81 and 84-95 without prejudice or disclaimer.

5. Delete the abstract, page 135, and insert the following abstract:

A method is disclosed for the production of a transgenic bovine or a transgenic bovine embryo comprising obtaining an ovum from bovine ovaries, maturing the ovum *in vitro*, fertilizing the mature ovum or ova *in vitro* to form a zygote, introducing a transgene into the zygote *in vitro* and maturing the zygote to a preimplantation stage embryo *in vitro*. To produce the transgenic bovine, the embryo is transplanted into a recipient female bovine, wherein the female bovine gestates the embryo to produce a transgenic bovine.

The following is an examiner's statement of reasons for allowance: The term "bovine" is meant to be cattle of the species *Bos taurus*.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

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Art Unit: 1804

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Any inquiry concerning this communication or earlier communications from the examiner should be directed to Deborah Crouch, Ph.D. whose telephone number is (703) 308-1126.

Any inquiry of a general nature or relating to the status of this application should be directed to the Group receptionist whose telephone number is (703) 308-0196.

Deborah Crouch
**DEBORAH CROUCH
PATENT EXAMINER
GROUP 1800**

Dr. D. Crouch
October 25, 1996

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